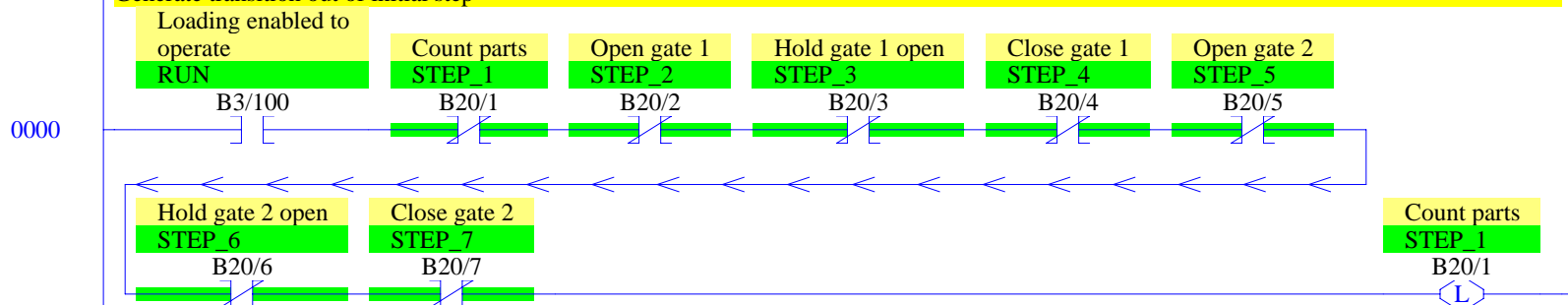


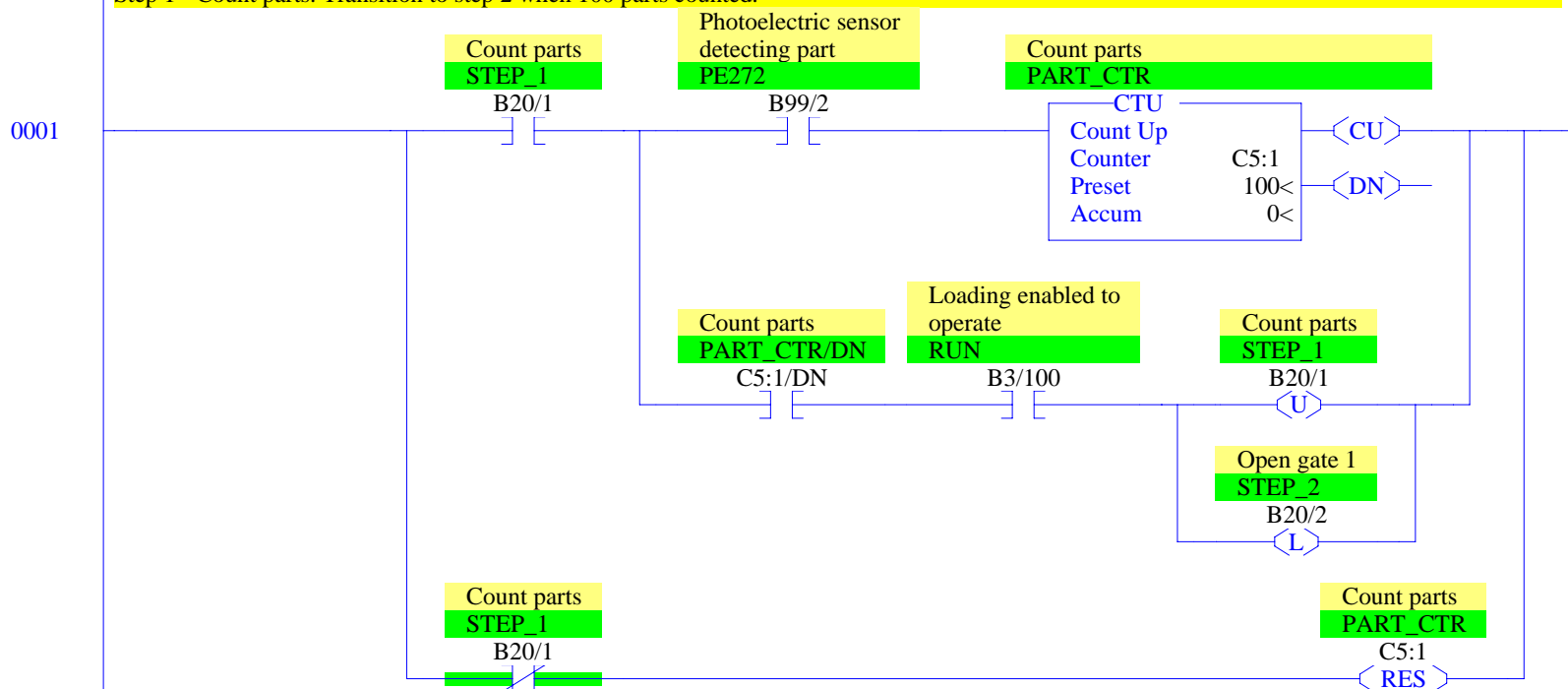
Example 15.2 Tub Loader Control with Simulation

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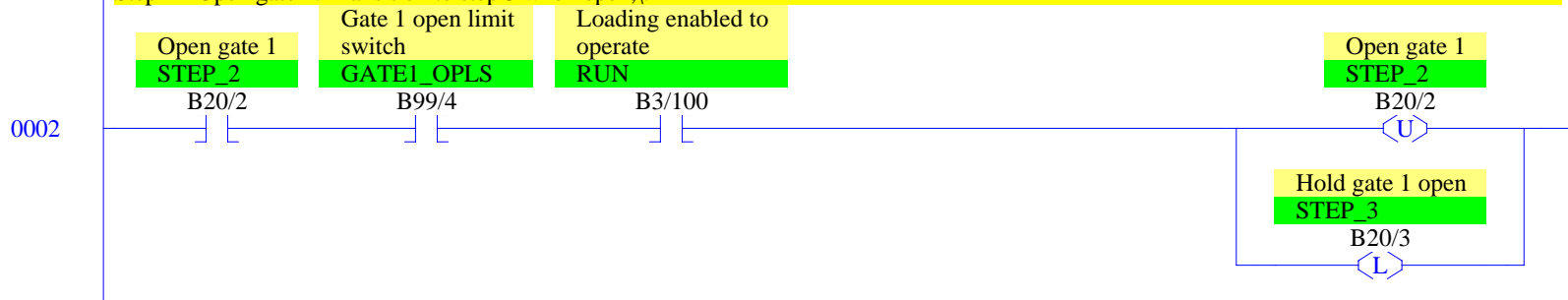
Generate transition out of initial step



Step 1 - Count parts. Transition to step 2 when 100 parts counted.



Step 2 - Open gate 1. Transition to step 3 when open,\.



0003

Step 3 - Hold gate 1 open for 3 secs after tub passes. Transition to step 4 when done.

Hold gate 1 open
STEP_3

B20/3

Proximity sensor
detecting tub
TUB_PROX

B99/3

Loading enabled to
operate
RUN

B3/100

Gate 1 hold
open timer
G1_HOLD_TMR

RTO	
Retentive Timer On	
Timer	T4:1
Time Base	0.01
Preset	300<
Accum	0<

Gate 1 hold
open timer
G1_HOLD_TMR/DN

T4:1/DN

Hold gate 1 open
STEP_3

B20/3

Close gate 1
STEP_4

B20/4

Gate 1 hold
open timer
G1_HOLD_TMR

T4:1

< RES >

0004

Step 4 - Close gate 1. Transition to step 5 when closed.

Close gate 1
STEP_4

B20/4

Gate 1 closed limit
switch
GATE1_CLLS

B99/5

Loading enabled to
operate
RUN

B3/100

Close gate 1
STEP_4

B20/4

Open gate 2
STEP_5

B20/5

0005

Step 5 - Open gate 2. Transition to step 6 when open, \.

Open gate 2
STEP_5

B20/5

Gate 2 open limit
switch
GATE2_OPLS

B99/6

Loading enabled to
operate
RUN

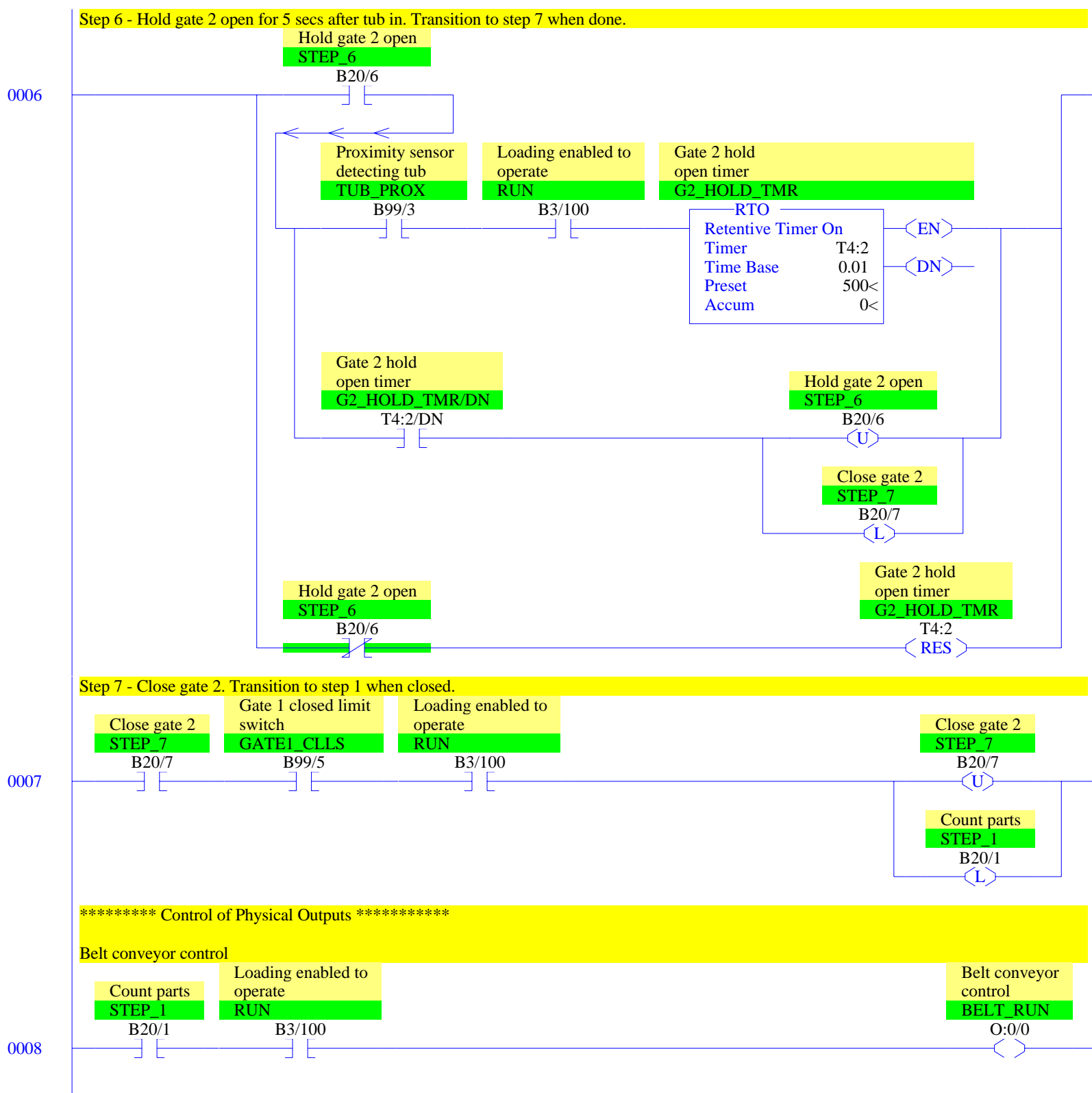
B3/100

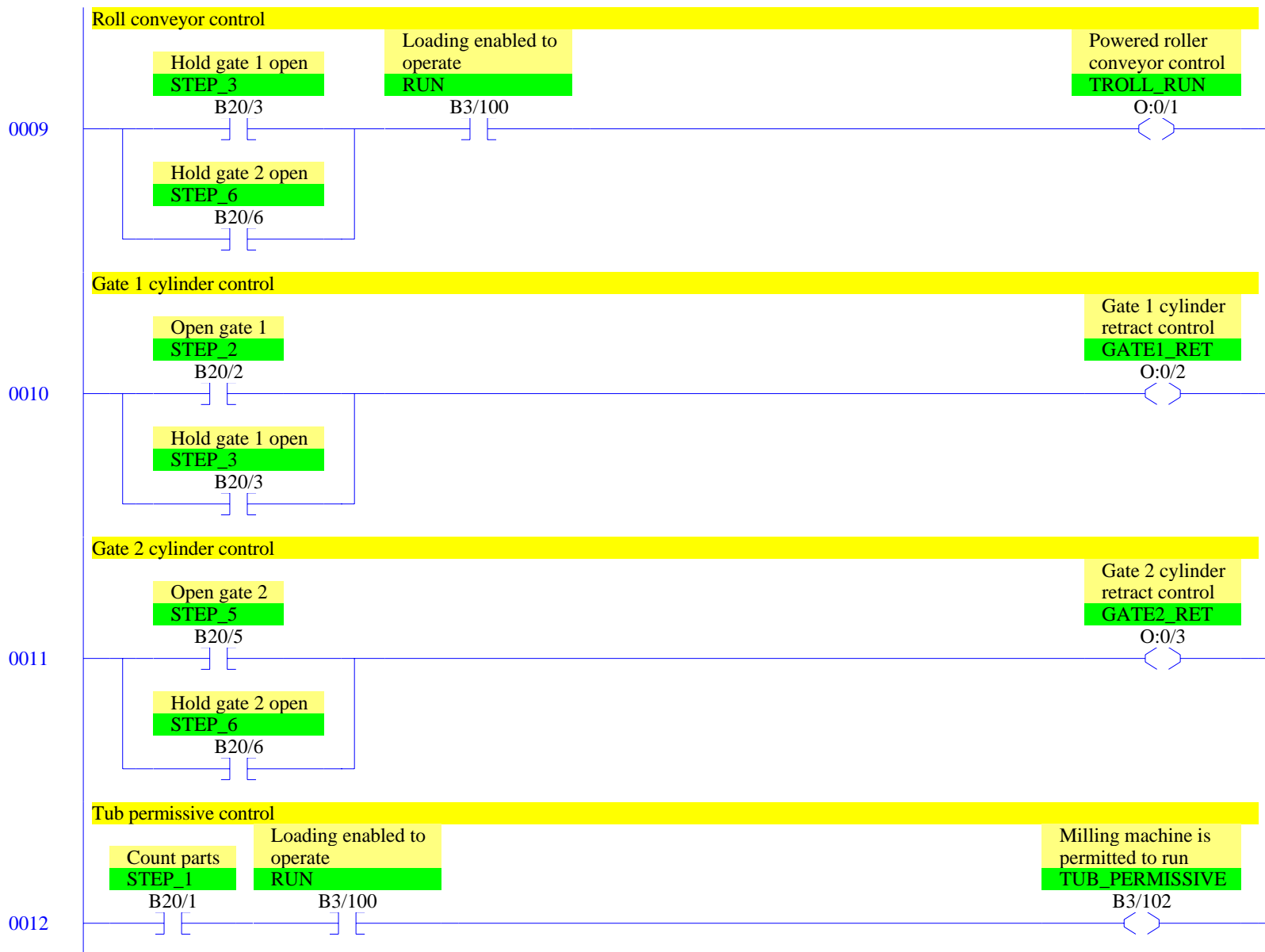
Open gate 2
STEP_5

B20/5

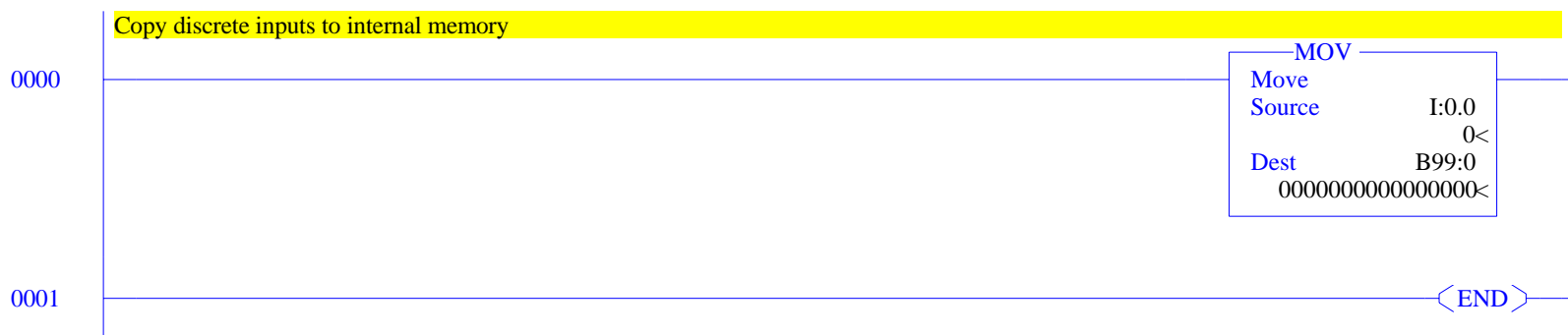
Hold gate 2 open
STEP_6

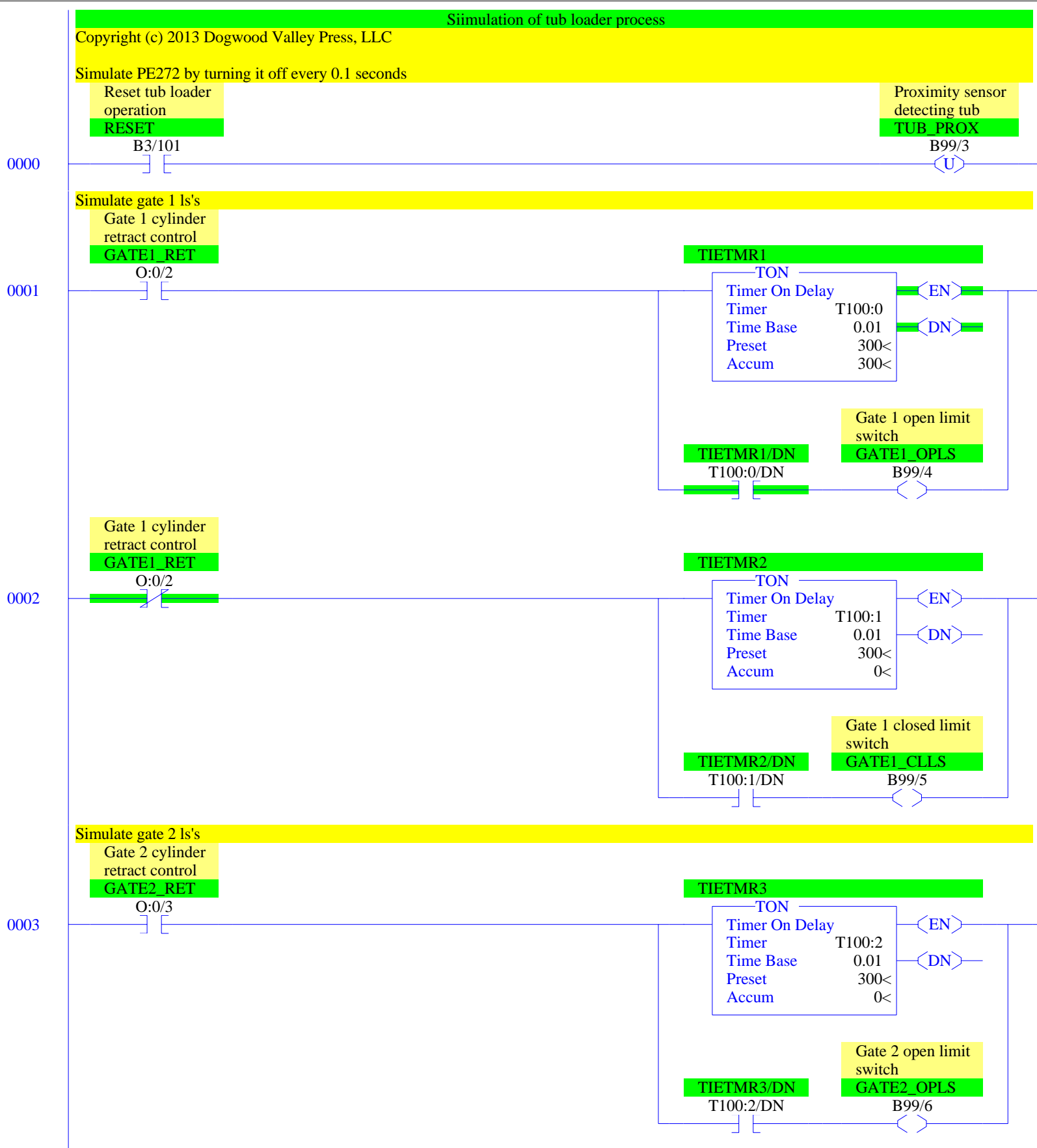
B20/6

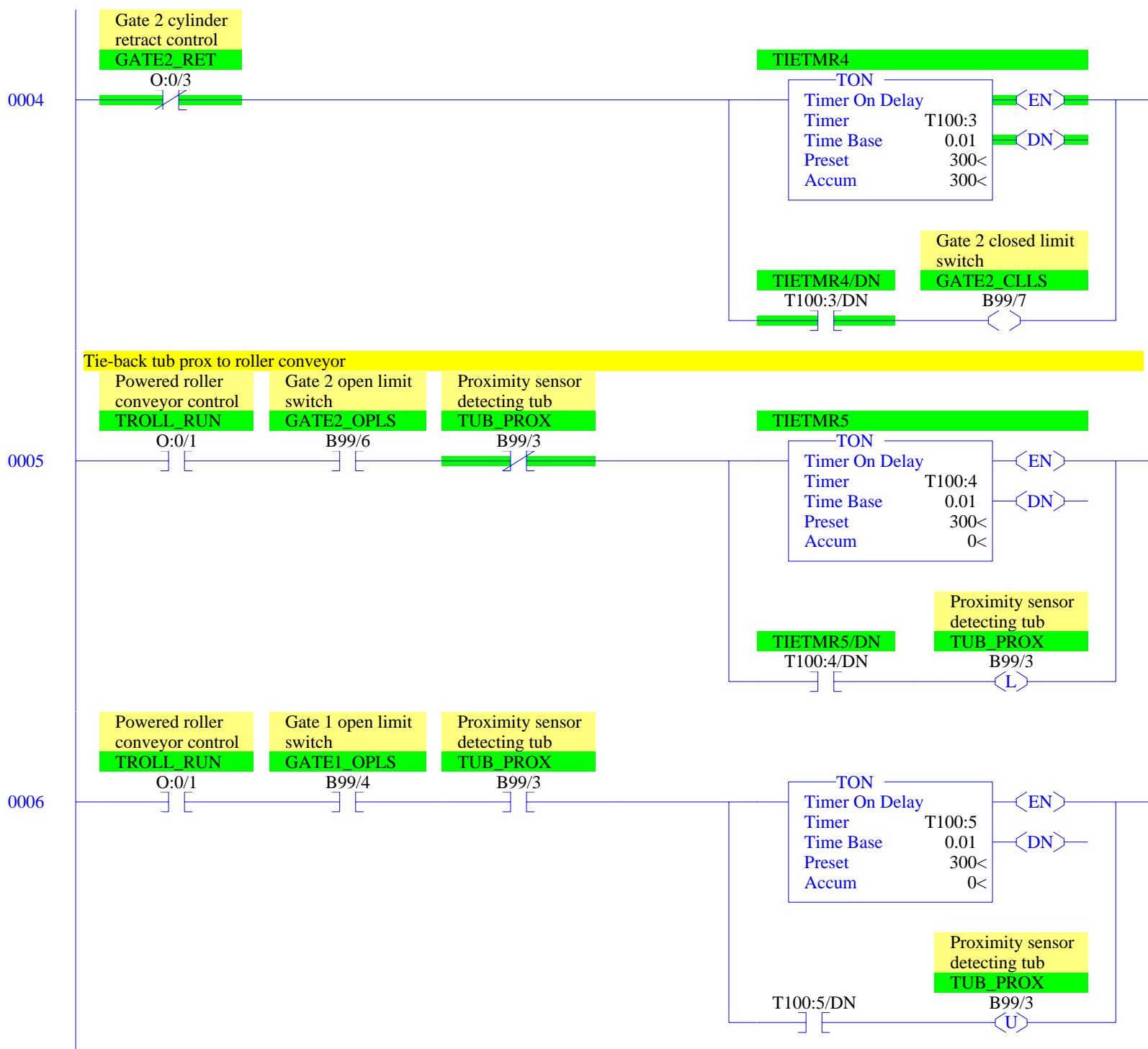


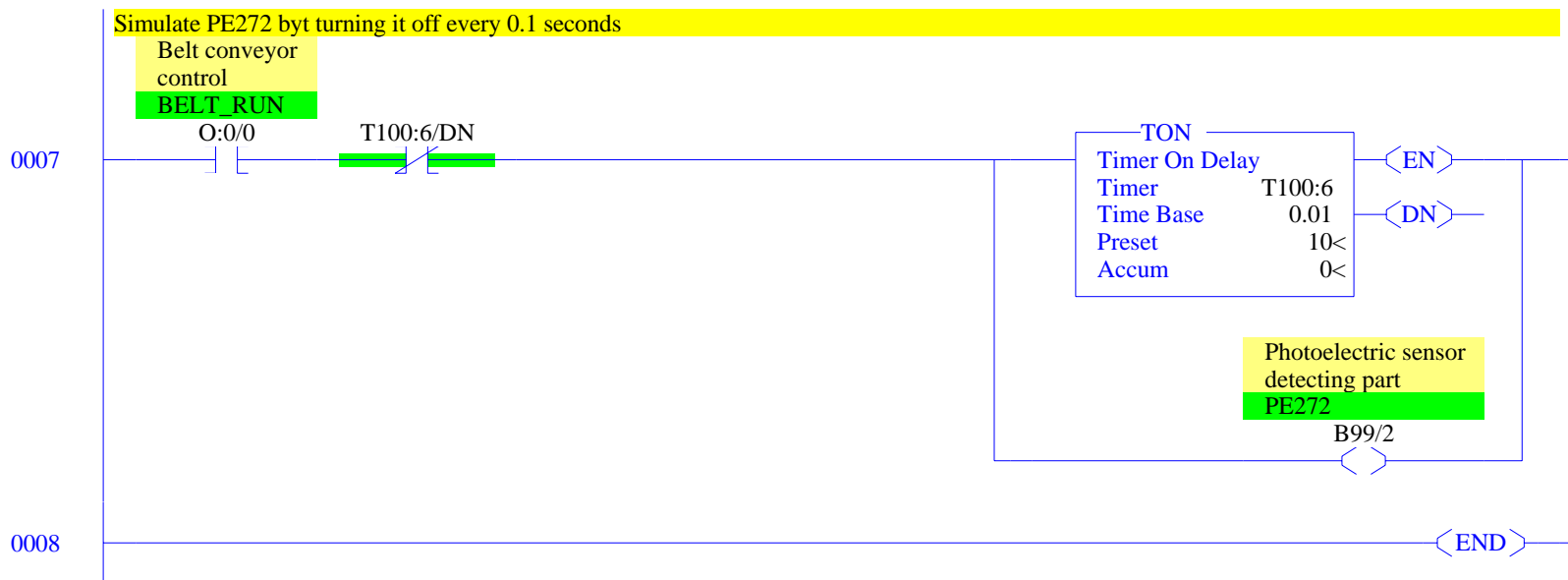












RSLogix 500 Cross Reference Report - Sorted by Address

O:0/0	- {BELT_RUN} Belt conveyor control OTE - File #2 - 8 XIC - File #100 TIEBACK - 7
O:0/1	- {TROLL_RUN} Powered roller conveyor control OTE - File #2 - 9 XIC - File #100 TIEBACK - 5, 6
O:0/2	- {GATE1_RET} Gate 1 cylinder retract control OTE - File #2 - 10 XIC - File #100 TIEBACK - 1 XIO - File #100 TIEBACK - 2
O:0/3	- {GATE2_RET} Gate 2 cylinder retract control OTE - File #2 - 11 XIC - File #100 TIEBACK - 3 XIO - File #100 TIEBACK - 4
I:0.0	- MOV - File #99 DUPLIC_INS - 0
B3/100	- {RUN} Loading enabled to operate XIC - File #2 - 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 12
B3/101	- {RESET} Reset tub loader operation XIC - File #2 - 13 File #100 TIEBACK - 0
B3/102	- {TUB_PERMISSIVE} Milling machine is permitted to run OTE - File #2 - 12
B3/200	- {ENAB_TIE_BACK} Enable tie-back simulation logic XIC - File #2 - 14 XIO - File #2 - 15
T4:1	- {G1_HOLD_TMR} Gate 1 hold open timer RTO - File #2 - 3 RES - File #2 - 3
T4:1/DN	- XIC - File #2 - 3
T4:2	- {G2_HOLD_TMR} Gate 2 hold open timer RTO - File #2 - 6 RES - File #2 - 6
T4:2/DN	- XIC - File #2 - 6
C5:1	- {PART_CTR} Count parts CTU - File #2 - 1 RES - File #2 - 1
C5:1/DN	- XIC - File #2 - 1
B20/1	- {STEP_1} Count parts OTL - File #2 - 0, 7 OTU - File #2 - 1, 13 XIC - File #2 - 1, 8, 12 XIO - File #2 - 0, 1
B20/2	- {STEP_2} Open gate 1 OTL - File #2 - 1 OTU - File #2 - 2, 13 XIC - File #2 - 2, 10 XIO - File #2 - 0
B20/3	- {STEP_3} Hold gate 1 open OTL - File #2 - 2 OTU - File #2 - 3, 13 XIC - File #2 - 3, 9, 10 XIO - File #2 - 0, 3
B20/4	- {STEP_4} Close gate 1 OTL - File #2 - 3 OTU - File #2 - 4, 13 XIC - File #2 - 4 XIO - File #2 - 0
B20/5	- {STEP_5} Open gate 2 OTL - File #2 - 4 OTU - File #2 - 5, 13 XIC - File #2 - 5, 11 XIO - File #2 - 0
B20/6	- {STEP_6} Hold gate 2 open OTL - File #2 - 5 OTU - File #2 - 6, 13 XIC - File #2 - 6, 9, 11

RSLogix 500 Cross Reference Report - Sorted by Address

```

B20/7      XIO - File #2 - 0, 6
           - {STEP_7} Close gate 2
           OTL - File #2 - 6
           OTU - File #2 - 7, 13
           XIC - File #2 - 7
           XIO - File #2 - 0
B99:0      - MOV - File #99 DUPLIC_INS - 0
B99/2      - {PE272} Photoelectric sensor detecting part
           OTE - File #100 TIEBACK - 7
           XIC - File #2 - 1
B99/3      - {TUB_PROX} Proximity sensor detecting tub
           XIC - File #2 - 6
           OTU - File #100 TIEBACK - 0
           XIO - File #100 TIEBACK - 5
           OTL - File #100 TIEBACK - 5
           OTU - File #100 TIEBACK - 6
           XIC - File #100 TIEBACK - 6
           XIO - File #2 - 3
B99/4      - {GATE1_OPLS} Gate 1 open limit switch
           XIC - File #100 TIEBACK - 6
               File #2 - 2
           OTE - File #100 TIEBACK - 1
B99/5      - {GATE1_CLLS} Gate 1 closed limit switch
           XIC - File #2 - 4, 7
           OTE - File #100 TIEBACK - 2
B99/6      - {GATE2_OPLS} Gate 2 open limit switch
           XIC - File #100 TIEBACK - 5
               File #2 - 5
           OTE - File #100 TIEBACK - 3
B99/7      - {GATE2_CLLS} Gate 2 closed limit switch
           OTE - File #100 TIEBACK - 4
T100:0     - {TIETMR1}
           TON - File #100 TIEBACK - 1
T100:0/DN  - XIC - File #100 TIEBACK - 1
T100:1     - {TIETMR2}
           TON - File #100 TIEBACK - 2
T100:1/DN  - XIC - File #100 TIEBACK - 2
T100:2     - {TIETMR3}
           TON - File #100 TIEBACK - 3
T100:2/DN  - XIC - File #100 TIEBACK - 3
T100:3     - {TIETMR4}
           TON - File #100 TIEBACK - 4
T100:3/DN  - XIC - File #100 TIEBACK - 4
T100:4     - {TIETMR5}
           TON - File #100 TIEBACK - 5
T100:4/DN  - XIC - File #100 TIEBACK - 5
T100:5     - TON - File #100 TIEBACK - 6
T100:5/DN  - XIC - File #100 TIEBACK - 6
T100:6     - TON - File #100 TIEBACK - 7
T100:6/DN  - XIO - File #100 TIEBACK - 7
U:99       - JSR - File #2 - 15
U:100      - {TIEBACK}
           JSR - File #2 - 14

```